

# Aircraft Icing Educational and Training Videos Produced for Pilots



*Tailplane icing video.*

As a part of NASA's aviation safety mission, the Icing Branch of the NASA Glenn Research Center at Lewis Field is producing educational and training videos to help pilots recognize and recover from in-flight icing hazards. These videos are a result of experience gained from the NASA/FAA Tailplane Icing Program. The first educational video, "Tailplane Icing," was written and produced solely by NASA Glenn. The response following the September 1998 release has been overwhelming. Thus far, 700 copies have been distributed. A request soon came to produce more videos covering a wider range of topics. Released in November 1999 was "Icing for Regional and Corporate Pilots." This training video was cowritten by NASA, the Federal Aviation Administration (FAA), and the Air Line Pilots Association (ALPA). It is focused specifically on the pilots and aircraft most likely to encounter in-flight icing conditions. A video tailored specifically for general aviation pilots will be produced in the Fall of 2000 followed by an Icing Basics primer.

The motivation for the educational video "Tailplane Icing" (running time, 23 min) was to equip pilots with an understanding of ice-contaminated tailplane stall, the cause of at least 16 accidents and 139 fatalities. The video discusses the role of the horizontal tailplane, illustrates the "paths to stall," and explains why the procedure for recovery from a tail stall is exactly opposite that for a wing stall and how to recognize the subtle tactile differences between the two.

The training video, "Icing for Regional and Corporate Pilots," is more comprehensive in scope. This 37-min video discusses ice protections systems, ice accretion physics, and the symptoms of ice accretion, the effects of ice on the aircraft in regards to both performance penalties and handling anomalies, recovery techniques, and finally, the phenomenon of supercooled large droplets (SLD's). It is available now.

**Find out more about these videos, or order them free of charge <http://icebox->**

**[esn.grc.nasa.gov/ext/education/education.html](http://esn.grc.nasa.gov/ext/education/education.html).**

**Dynacs Engineering Co., Inc. contact:** Dr. Judith Foss Van Zante, (216) 433–3587,  
[Judith.VanZante@grc.nasa.gov](mailto:Judith.VanZante@grc.nasa.gov)

**Glenn contacts:** Thomas P. Ratvasky, (216) 433–3905,  
[Thomas.P.Ratvasky@grc.nasa.gov](mailto:Thomas.P.Ratvasky@grc.nasa.gov); and William J. Rieke, (216) 433–2036,  
[William.J.Rieke@grc.nasa.gov](mailto:William.J.Rieke@grc.nasa.gov)

**Author:** Dr. Judith Foss Van Zante

**Headquarters program office:** OAST

**Programs/Projects:** AOS